

What is claimed is:

1. An apparatus for assembling a swash plate with pistons in a swash plate compressor, wherein each of the pistons includes a swash plate-receiving section for receiving a pair of opposed shoes therein and having an insert groove for receiving the swash plate mounted on a rotational shaft and a piston body to be inserted into a cylinder bore of a cylinder block so that the swash plate is inserted into the insert grooves of the pistons, the apparatus comprising:

a base plate;

a piston-loading means for loading the pistons to be lined up in a longitudinal direction;

a piston-shifting means arranged slidably on the base plate for shifting position of the pistons loaded by the piston-loading means in order; and

a rotating means for rotating the swash plate so that the pistons shifted by the piston-shifting means are assembled to the swash plate.

2. The apparatus for assembling a swash plate with pistons in a swash plate compressor according to claim 1, wherein the piston-loading means comprising:

a stationary guide member fixedly arranged in the base plate for guiding the pistons to be lined up, the stationary guide member being inserted into the insert grooves of the pistons with the shoes accommodated in the insert grooves in such a fashion that its top and bottom are contacted with the shoes; and

a piston-loading member for loading the pistons guided by the stationary guide member to a predetermined spaced gap.

10        3. The apparatus for assembling a swash plate with pistons in a swash plate compressor according to claim 2, wherein the piston-loading member has a plurality of loading grooves into which bodies of the pistons are inserted partially.

15        4. The apparatus for assembling a swash plate with pistons in a swash plate compressor according to claim 1, wherein the piston-shifting means is a transport plate which is arranged slidable with respect to the base plate, and supports undersides of the bodies of the pistons.

20        5. The apparatus for assembling a swash plate with pistons in a swash plate compressor according to claim 2, wherein the piston-shifting means is a transport plate which is arranged

slidable with respect to the base plate, and supports undersides of the bodies of the pistons.

6. The apparatus for assembling a swash plate with pistons  
5 in a swash plate compressor according to claim 5, wherein the piston-loading member is detachably coupled with the transport plate.

7. The apparatus for assembling a swash plate with pistons  
10 in a swash plate compressor according to claim 4, wherein a guide groove is formed longitudinally in an upper surface of the base plate and an insert portion is formed in an underside of the transport plate, wherein the insert portion is inserted into and slid along the guide groove.

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8. The apparatus for assembling a swash plate with pistons in a swash plate compressor according to claim 5, wherein a guide groove is formed longitudinally in an upper surface of the base plate and an insert portion is formed in an underside of the  
20 transport plate, wherein the insert portion is inserted into and slid along the guide groove.

9. The apparatus for assembling a swash plate with pistons

in a swash plate compressor according to claim 1, wherein the rotating means comprising:

an auxiliary plate; and

5 a movable guide member having an upper central portion, into which a lower end of the rotational shaft is fixedly inserted in part, and a shaft portion projected from a lower central portion thereof and rotatably extended through the auxiliary plate, wherein the movable guide member cooperates with the piston-shifting means to rotate the swash plate together with  
10 the rotational shaft, and when the swash plate is inserted into the insertion grooves of the pistons, receives the bodies of the pistons at least in part to guide the same.

10. The apparatus for assembling a swash plate with  
15 pistons in a swash plate compressor according to claim 9, wherein a plurality of fixing pins are formed in a top of the movable guide member and pin-receiving grooves are formed in an underside of the swash plate for receiving the fixing pins so that the swash plate maintain a certain direction.

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11. The apparatus for assembling a swash plate with pistons in a swash plate compressor according to claim 9, further comprising a block having an opened upper end, an opened lateral

portion for allowing the pistons to be introduced and a space for surrounding the movable guide member.

12. The apparatus for assembling a swash plate with  
5 pistons in a swash plate compressor according to claim 9, wherein a pinion is formed around the shaft portion, and wherein a rack is formed in the piston-shifting means to mesh with the pinion.

13. The apparatus for assembling a swash plate with  
10 pistons in a swash plate compressor according to claim 11, further comprising an anti-release member provided in the piston-loading means for guiding the pistons while preventing release of the pistons from the swash plate when the pistons assembled to the swash plate are passed through the opened portion of the  
15 block.

14. The apparatus for assembling a swash plate with  
pistons in a swash plate compressor according to claim 1, wherein the pistons are single head pistons.

20 15. The apparatus for assembling a swash plate with pistons in a swash plate compressor according to claim 1, wherein the

pistons are loaded on the piston-loading means in a vertically erected position.